Java Platform Overview

Session 402

Java Platform Overview

Scott Adler
Java Platform Classes

Overview

- Java 2 Platform Overview
- Mac OS X Integration
- Java on Mac OS X Documentation
- J2SE v1.4

Apple Frameworks

Aqua

Classic **Java** **Carbon** **Cocoa**

Quartz **OpenGL** **QuickTime**

Darwin

Java 2 Standard Edition Overview

Java 2: Cross-Platform "Editions"

Enterprise

Standard

Micro

Java Language

HotSpot Virtual Machine

KVM

Card VM

Java 2 Standard Edition

Deployment	Java Web Start	Java Plug-in

UI Toolkit	Swing		AWT
	Java 2D		
	Sound	Input Methods	Accessibility

Integration APIs	RMI	JDBC	JNDI	CORBA

Core APIs	Beans	Locale Support	JNI
	Lang	Networking	Collections
	Util	Security	

Java Virtual Machine	HotSpot Compiler
	HotSpot Virtual Machine

OS Platforms	Mac OS X	Linux	Window	Solaris	Other

Mac OS X Integration

Mac OS X Look for Java

- Aqua Look and Feel
  - AWT Widgets
  - Swing looks great!
  - Menu placement
- Quartz 2D integration
  - Fonts
  - Anti-aliasing
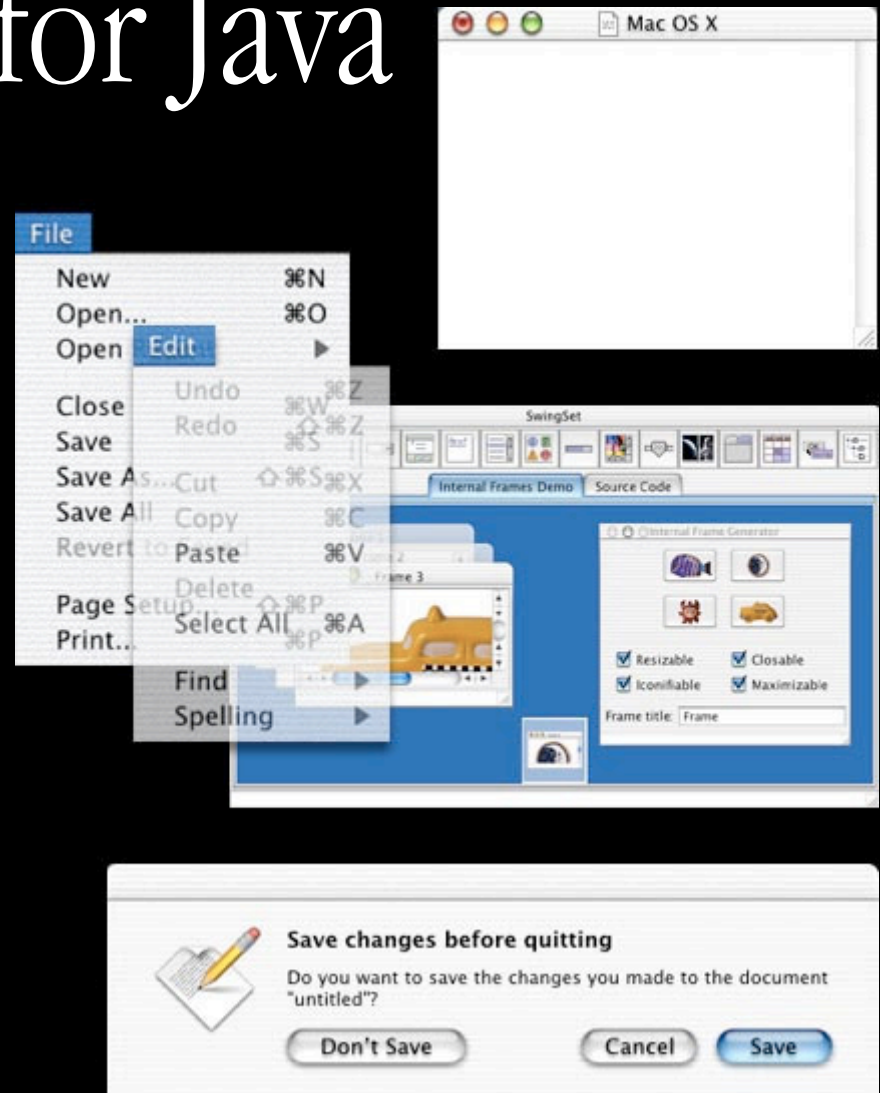
Mac OS X Integration

- Application specific
  - 404 Tailoring Applications for Mac OS X
- Browser based
  - 403 Java in the Browser
- Mac OS X Packaging/Deployment
- JDirect and JNI
- Mac OS X Java Toolkit (MRJToolkit)

Mac OS X Integration: Deployment

- Applications

- Java Web Start

- Applets/Plug-in

InstallAnywhere
PowerUpdate

Q: What do you need to develop applications using Mac OS X and Java?

A: Documentation

Java Documentation

Bodhi Gerfen
Technical Publications

Documentation

- Where are we today?

- Where are we are going?

- How do you find it?

Accomplishments

- Reorganized the Web site

- Revised the Release Notes format

- Updated Java Development on Mac OS X

- Added Java specific details to Project Builder Help

Future Plans

- Include the API reference with the Developer Tools

- Integrate documentation with the Developer Tools

- Provide topic-based tutorials

- Develop tutorials for Beginning and Experienced Java Developers

- More to come . . .

How to Access Documentation

- Online at **http://developer.apple.com/techpubs/macosx/Java/java.html**

- On your computer
  - Included with Mac OS X Developer Tools
  - /Developer/Documentation/Java
  - Developer Help Center

- Check ADC News for latest updates **http://developer.apple.com/devnews/**

J2SE v1.4 Enhancements

J2SE v1.3 Platform

Deployment	Java Web Start	Java Plug-in

UI Toolkit	Swing		AWT	
	Java 2D			
	Sound	Input Methods	Accessibility	

Integration APIs	RMI	JDBC	JNDI	CORBA

Core APIs	Beans	Security
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J2SE v1.4 Platform

New in 1.4!

Deployment	Java Web Start	Java Plug-in

UI Toolkit	Swing		AWT
	Java 2D		Volatile Images
	Sound	Input Methods	Accessibility

Integration APIs	RMI	JDBC	JNDI	CORBA

Core APIs	Beans	Security	Preferences
	Lang	Networking	XML
	Util	Locale Support	New I/O
	JNI	Collections	Logging

Java Virtual Machine	HotSpot Compiler
	HotSpot Virtual Machine

OS Platforms	Mac OS X	Linux	Window	Solaris	Other

J2SE v1.4 Platform

New in 1.4!

Deployment	Java Web Start	Java Plug-in

UI Toolkit

Swing	AWT	
Java 2D		Volatile Images
Sound	Input Methods	Accessibility

Integration APIs

RMI	JDBC	JNDI	CORBA

Core APIs

Beans	Security	Preferences
Lang	Networking	XML
Util	Locale Support	New I/O
JNI	Collections	Logging

Java Virtual Machine

HotSpot Compiler
HotSpot Virtual Machine

OS Platforms

Mac OS X	Linux	Window	Solaris	Other

J2SE v1.4 Platform

New in 1.4!

Deployment	Java Web Start	Java Plug-in

UI Toolkit

Swing	AWT

Java 2D	Volatile Images

Sound	Input Methods	Accessibility

Integration APIs

RMI	JDBC	JNDI	CORBA

Core APIs

Beans	Security	Preferences
Lang	Networking	XML
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Java Virtual Machine

HotSpot Compiler
HotSpot Virtual Machine

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Mac OS X	Linux	Window	Solaris	Other

J2SE v1.4 Additions

New in 1.4!

- UI Frameworks

- Web/Enterprise Frameworks

- Core Frameworks

UI Frameworks

- AWT
- Swing
- Java 2D
- Printing

AWT

- Headless Support

- Fullscreen Exclusive Mode API

- Enhanced Frames Support

- Mouse Wheel Support

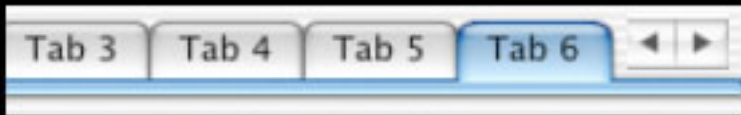- New Focus Architecture

- More . . .

Demo

1.4 Focus Policy

New
in 1.4!

Swing

- Indeterminate JProgress Bars

- JSpinner

Tab 3 Tab 4 Tab 5 Tab 6

- Scrollable JTabbedPane

- JFormattedTextField

- New drag-and-drop architecture

Java 2D

- New pipeline architecture

- Hardware acceleration for offscreen images

- Image I/O framework

- BiDi text

- More . .   .

Printing

- Java Print Service API
  - Print Device Discovery
  - Extensible Printing API
  - Plug-able Service Provider Interface

Web/Enterprise Frameworks

- XML processing
- JDBC 3.0
- JNDI
- RMI enhancements
- RMI over IIOP

Core VM Features

- Improved debugging
- Assertions
- Chained exceptions
- Full speed debugging
- HotSwap code substitution
- More . . .

- Go to Session 406 Java VM Internals

Core Frameworks

- New I/O APIs
- Preferences
- Logging API
- IPv6 support

Demo

Victor Hernandez
Java Runtime Engineer

New
in 1.4!

Security

- Java Secure Sockets Extension—was in 10.1
- Java Cryptography Extension
- Java Authentication and Authorization Service
- Java GSS-API
- Java Certification Path API

Going Forward

1.4 Development

- Multiple JDK support
- For details go to Session 406 Java VM Internals

Java 1.4 Developer Preview

New in 1.4!

- When?
  - Right now!

    developer.apple.com/java

- What's in it:
  - HotSpot Client VM
  - 1.3.1 GUI frameworks
  - Everything else 1.4
- Go to 406 for more details!

Summary

- Java 2 Platform included in Mac OS X
- Java 1.3.1 on machines now
- 1.4 is coming!
    - Developer Preview today

Roadmap

403 Java in the Browser:
Applets, Web Start, and more . . .
Room C
Tues., 3:30pm

404 Tailoring Java Apps for Mac OS X:
Building double-clickable Java apps
Room J
Tues., 5:00pm

405 Java Web Services:
XML, SOAP, etc.
Room C
Wed., 10:30am

406 Java Virtual Machine Internals:
Take a look under the hood
Room C
Wed., 3:30pm

Roadmap

407 Java Performance:
Make your applications faster

Room C
Fri., 9:00am

408 QuickTime for Java Overview:
Use QuickTime directly from Java

Room C
Fri., 10:30am

700–715 WebObjects Sessions:
See Your Agenda for Session Information

Room A1
All Week!

Links and Resources

- Apple Java Developer Resources
  - http://developer.apple.com/java
    - New Documentation!
- Java-dev Mailing List
  - java-dev@lists.apple.com
- Developer Technical Support
  - dts@apple.com

Who to Contact

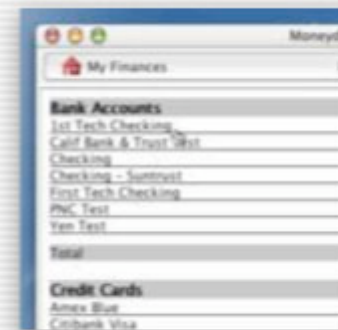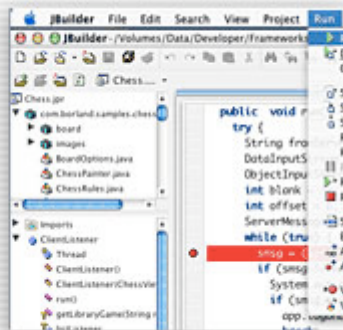**Alan Samuel**
Java Technologies Evangelist
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Q&A

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Java Technologies Evangelist
bluker1@apple.com

http://developer.apple.com/wwdc2002/urls.html